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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,792	12/29/2005	Kenya Hori	0438887-0182	8756
53080 7590 12/10/2009 MCDERMOTT WILL & EMERY LLP 600 13TH STREET, NW WASHINGTON, DC 20005-3096				
EXAMINER				
SANEI, HANA ASMAT				
ART UNIT		PAPER NUMBER		
2889				
MAIL DATE		DELIVERY MODE		
12/10/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/562,792

**Applicant(s)**

HORI ET AL.

**Examiner**

HANA A. SANEI

**Art Unit**

2889

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 3-7 is/are allowed.
- 6) ☒ Claim(s) 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-06)  
Paper No(s)/Mail Date 11/4/09
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

The Amendment, filed on 11/04/09, has been entered and acknowledged by the Examiner.

Cancellation of claim(s) 2 has been entered.

Claim(s) 1, 3-8 are pending in the instant application.

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim(s) 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dobson et al (US 6265823 B1) in view of Hseuh et al (US 5587329).

Regarding Claim 8, Dobson teaches a luminescent array (See at least Fig. 1) in which phosphor elements ("semiconductor quantum particles," used in the electroluminescent light emitter, Col. 4, lines 15-18) are arranged in a plane (in the vertical axis, y-axis, Fig. 1), wherein the phosphor element comprises: a pair of electrodes (2, 6, "electrodes," Col. 1, lines 6-11 & Col. 2, lines 26-28) facing each other;

a phosphor layer ("semiconductor quantum particles," Col. 4, lines 15-18) interposed between the pair of electrodes and including a semi-conductive phosphor fine particle ("semiconductor quantum particles," Col. 4, lines 15-18) in which at least a part of a surface is covered with a conductive organic material ("quantum particle layer embedded in polymers such as PPV or PVK," Col. 4, lines 47-50). Dobson fails to exemplify the use of thin film transistor.

In the same field of endeavor, Hseuh teaches an active matrix for an electroluminescent display as conventional in the art ("thin film active matrix electroluminescent displays are well known in the art and are used as fiat panel displays in a variety of applications, Col. 1, lines 16-18). Hseuh teaches the suitability of using a thin film transistor connected with at least one of the pair of electrodes (See at least Figs. 1 & 2I); a plurality of x electrodes (114, "select line," Col. 2, lines 64-65), in parallel with each other, extending in a first direction in parallel with a face of the luminescent array; and a plurality of y electrodes (116, "data line," Col. 2, lines 65-66) extending in parallel with a second direction, orthogonal to the first direction (114 being orthogonal to 116), in parallel with the face of the luminescent array, wherein a thin film transistor (TFT, Fig. 1 via 102) of the luminescent array is connected with the x electrode and the y electrode, respectively (See at least Figs. 1 & 2I) for the purpose of essentially preventing crosstalk between respective pixels as a result of the actively driven matrix.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the driving of the electroluminescent device, as disclosed by Hseuh, in the invention of Dobson in order to ensure the prevention of

crosstalk between respective pixels and to choose from one of the configurations disclosed by Hseuh, since Hseuh teaches the suitability of using an active driven electroluminescent device and it has been held to be within the general skill of an artisan to select a known material or configuration on the basis of the intended use [See MPEP 2144.07].

***Allowable Subject Matter***

A. Claim(s) 1, 3-7 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The prior art of record (most comprehensive prior art of record to Dobson et al (U.S. Pat. No. 6265823)) teaches a phosphor element comprising: a pair of electrodes facing each other; and a phosphor layer interposed between the pair of electrodes and including a semi-conductive phosphor fine particle in which at least a part of a surface is covered with a conductive organic material, wherein the conductive organic material is chemically adsorbed on the surface of the semi-conductive phosphor fine particle.

However, the prior art of record neither anticipates nor renders obvious to one ordinary skilled in the art the phosphor element comprising the various elements as claimed above in combination with the specific limitation of conductive organic material being chemically adsorbed on the surface of the semi-conductive phosphor fine particle by a dehydration reaction between a hydroxide group of the surface of the semi-conductive phosphor fine particle and the conductive organic material as set forth in Claim 1.

Claim(s) 3-7 are allowable because of their dependency status from Claim 1.

***Response to Arguments***

With respect to Claim(s) 1, 3-7, regarding applicant's assertion that it is not plausible to add a "dehydration reaction (see Applicant's Argument(s) of Page 3) to the invention as disclosed by Dobson et al (U.S. Pat. No. 6265823), the Examiner finds this to be persuasive, as such rejection withdrawn.

Applicant's arguments filed on 11/4/09 have been fully considered but they are not persuasive.

A. With respect to Claim 8, in response to Applicant's arguments that the conductive organic material of Dobson et al (U.S. Pat. No. 6265823) will not undergo a "dehydration reaction," the Examiner respectfully disagrees.

While the claims are read in light of the specification, limitations from the specification cannot be read into the claims. The Examiner is required to give the claim its broadest reasonable interpretation. Therefore, since there is no mention of any form adsorption by a "dehydration reaction/process" in the current claim language of Claim 8, the Examiner considers the prior art as meeting the claim requirement.

So long as Dobson teaches a phosphor layer ("semiconductor quantum particles," Col. 4, lines 15-18) interposed between the pair of electrodes and including a semi-conductive phosphor fine particle ("semiconductor quantum particles," Col. 4, lines 15-18) in which at least a part of a surface is covered with a conductive organic material ("quantum particle layer embedded in polymers such as PPV or PVK," Col. 4, lines 47-50), then the current claim limitation(s) are met.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hana A. Sanei whose telephone number is (571)-272-8654. The examiner can normally be reached on Monday- Friday, 9 am - 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on (571) 272-2303. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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